

## ABSTRACT

The droplet ejection apparatus of the invention includes a plurality of droplet ejection heads 100 each having a diaphragm, an actuator that displaces the diaphragm, and a nozzle through which a liquid in a cavity is ejected in the form of droplets in response to the increase and decrease of the internal pressure of the cavity, ejection selecting means 182 for selecting the nozzle of the ink jet head 100 in the plurality of ink jet heads 100 through which a ink droplet is to be ejected, ejection failure detecting means 10 for detecting a residual vibration of the diaphragm and detecting an ejection failure of the droplets on the basis of a vibration pattern of the detected residual vibration, and switching means 23 for switching a connection of the actuator from a driving circuit to the ejection failure detecting means 10 after carrying out a droplet ejection operation by driving the actuator.